

ABSTRACT OF THE DISCLOSURE

The present invention relates to a position measuring instrument for, for example, scanning a photoreceiver as a target to be measured, and more particularly to an automatic position detection instrument capable of emitting distance measuring light and tracking light while turning directions of the distance measuring light and the tracking light so that three-dimensional measurement of a light receiving position is performed, and further capable of transmitting measured data to a photoreceiver provided on a target. A light source unit emits measuring light, and then a light receiving unit receives its reflected light. A scanning means emits measuring light in a scanning direction, and leads its reflected light to the light receiving unit. An angle detector detects a rotational position of the scanning means. The measuring light includes distance measuring light expanding in a fan-shaped manner. Its reflected light can be used to measure a distance to a reflector.